

BEES COLLECTED BY CHARLES DARWIN ON THE VOYAGE OF THE "BEAGLE"

By T. D. A. COCKERELL

Several years ago I noticed among the undetermined bees in the Hope Museum at Oxford two species of *Halictus* collected by Charles Darwin. Last summer, being again in Oxford, I made descriptions of these, with the kind permission of Professor E. B. Poulton. One specimen, a female, was collected at Sydney, N. S. W.; the other, a male, came from Hobart Town, Tasmania. Both are black species of ordinary appearance. I went through all the collection of Australian *Halictus* in the British Museum, but neither of Darwin's species was represented. Returning home, I similarly went over my own collection, and found that the male differed in no essential respects, so far as I could make out, from *Halictus repertus* Cockerell. The female I was still unable to place, nor could I identify it with any of the few species absent both from my collection and that of the British Museum. If it seems singular that a bee collected at Sydney so long ago should still be new, it must be remembered that very little attention has ever been paid to *Halictus* in New South Wales, the list of species known from that state being very much shorter than the lists for Tasmania, Victoria or Queensland. In fact, when I was in the vicinity of Sydney I caught only a single species of *Halictus*, and it proved to be new. This was in 1928.

Halictus (*Evylaeus*) *darwiniellus* new species.

♀. Black; anterior wing 6.6 mm. long; scape long, flagellum ferruginous beneath except basally; hair of head and thorax in poor condition, but pale; head rather large, ordinary, orbits converging below; clypeus convex, shining, with sparse punctures, the upper part with a shining median groove; supraclypeal area dull, top of head unusually narrow anteroposteriorly; cheeks poorly developed, in lateral profile not as wide as eyes; mesothorax convex, with no distinct median groove, moderately shining, with very numerous minute punctures; scutellum shining and finely punctured, basal area of mesothorax large, dull and granular, at sides with distinct though delicate plicæ, and a little shining; posterior truncation not sharply bor-

dered, seen from behind there is a transverse thickening in the middle at upper border; mesopleura dully minutely punctured; tegulae very dark brown, almost black, shining; wings greyish; stigma large, dull brown; nervures pale brown, outer recurrent and intercubitus very pale and weak; basal nervure very strongly bent, falling considerably short of nervulus; second cubital cell broad, much broadened below, receiving first recurrent nervure near to end; third cubital cell about or nearly as broad as first on marginal cell, and broadened below, receiving second recurrent nervure well before end; legs black, tarsi rufous at apex; hair on innerside of hind basitarsi light yellowish; hind tibiae with shining silvery whitish hair on both sides, but a broad band of dark chocolate posteriorly; abdomen broad, moderately shining, very finely and quite closely punctured; apical depressions of tergites broad, slightly brownish, in middle of second tergite quite or almost as broad as elevated part, and on third tergite broader than the elevated part; second and third tergites with basal bands of white tomentum, failing in middle; fourth tergite with a broad entire speckled band; apex with greyish brown hair; venter with white hair, not forming a scopa.

Sydney, N. S. W. (*Charles Darwin*). I use the diminutive form for the specific name, not only on account of the small size of the insect, but also because there is in South America a "darwinii" belonging to the Halictinae.

The wing is about as long as that of *T. lanarius* Smith, but that species (type examined) has a highly polished supraclypeal area, no groove on upper part of clypeus, area of metathorax different, and stigma red. *H. oblitus* Smith, which has a shining supraclypeal area, has a very dark stigma. *H. repraesentans* Smith has a quite different metathoracic area. *H. imitans* Ckll. is much too small. *H. asperithorax* Ckll. is closely allied, with the same sort of metathoracic area, and wings similar, but the dull mesothorax and the abdomen differ. *H. gilesi* Ckll. has quite a different metathoracic area. *H. granulithorax* Ckll. differs in the mesothorax, etc. *H. griseovittatus* Ckll. differs by the metathoracic area, more coarsely punctured mesothorax, etc. *H. supralucens* Ckll. has a polished supraclypeal area and polished apical part of metathoracic area.

Halictus repertus Cockerell

♂. Black; anterior wing about 4 mm. long; head practically circular seen from in front; scape short, shining black; flagellum very long, submoniliform, black, appearing greyish below; front entirely dull, supraclypeal area elevated, shining; clypus dullish, about the lower half light yellow,

the yellow angularly produced in middle above; face with white hair; mandibles partly rufous, but black at base; mesothorax convex, shining, finely punctured, with a median groove only in front; scutellum shining, finely punctured, not bigibbous; area of metathorax with strong but rather delicate radiating plicæ; posterior face margined at sides; tegulæ small, shining, very dark brown; wings hyaline, stigma large, very dilute yellowish brown; nervures pale but outer recurrent and intercubitus not especially weakened; basal nervure falling far short of nervulus; second cubital cell very narrow, receiving first recurrent nervure before end; third cubital cell broad, strongly bulging outward; legs black, with white hairs, tarsi yellowish-fulvous, becoming dark apically; abdomen shining, very finely punctured, margins of tergites narrowly rufous; no hair bands or spots.

Hobart Town, Tasmania (*Charles Darwin*). Compared with some other Tasmanian males, *H. baudini* Ckll. is much larger; *H. isthmalis* Ckll. differs in color of tibiae; *H. bassi* Ckll. and *H. blighi* Ckll. have the face dark; *H. boweni* Ckll. has darkened wings.

H. repertus was described from Victoria; one might expect the Tasmanian form to be racially distinct, but several species (*H. seductus* Ckll., *H. opacicollis* Ckll., *H. orbatus* Smith, *H. imitans* Ckll., *H. erythrurus* Ckll., *H. cyclognathus* Ckll.) occur both in Tasmania and Victoria, and apparently remain unmodified. The separation of Tasmania from Victoria is of quite recent date, geologically speaking. In typical *H. repertus*, the end of the abdomen has a red rounded plate, which I did not notice in the Darwin specimen, but it was probably somewhat retracted.

There is in the British Museum another Australian bee which may possibly have come from the "Beagle" expedition, but the accession book only shows that it was "bought at Mr. Children's sale" in 1840. It has a very curious history, as follows:

Reepenia testacea (Smith)

Tetralonia testacea F. Smith. Cat. Hymenop. Ins. British Museum. Part II, Apidae (1854), p. 301. Africa.

Nomia testacea (Smith) Cockerell. Ann. Mag. Nat. Hist., Ser. 8, vol. iv. Oct., 1909. p. 311.

Nomia (Reepenia) eboracina Cockerell. Ann. Mag. Nat. Hist., Ser. 8, vol. ix. 1912, p. 377. Cape York, Queensland (*Froggatt*).

Reepenia eboracina Cockerell. Mem. Queensland Museum, vii. (1921) p. 81.

In the catalogue from Children's sale, it is marked "*Halictus*, Africa," and while this is incorrect as to the genus, it is nearer than Smith's assignment. The specimens never came from Africa, of course, but evidently were obtained by some expedition which visited Australia, and also Africa on the way home.

The following details are from the male type of *R. testacea*:

Eyes large; face narrow, entirely fulvous, ocelli large; antennae long, slender, fulvous, dusky toward apex; area of metathorax plicatulate, but sharply margined, posterior truncation covered with long hair; tegulae rather large, clear rufotestaceous; second cubital cell about square, receiving first recurrent nervure at about beginning of last third; basal nervure strongly arched, falling short of nervulus; stigma quite large; marginal cell rather pointed; a strong tubercle at each side of scutellum; hind legs simple; depression of first tergite very short, of others large; abdomen oval, shining dark reddish. The hind wing has a stigma, a character which is unique in *Reepenia*. One specimen shows the mouth parts, resembling those of *Nomia*, not at all of *Tetralonia*.

From the appearance of this bee, I feel confident that it must be nocturnal, but I have no actual evidence on this point.

The name *Nomia frieseana* Cockerell (*friesei* Cockerell, not Magretti) was proposed for the African *Nomia testacea* Friese. This will stand if we agree with Friese in treating *Reepenia* as a subgenus of *Nomia*. I consider *Reepenia* a valid genus, and shall recognize the name *Nomia testacea* Friese as valid.